

Notice of Allowability**Application No.**

10/564,266

Applicant(s)

YANG, HONGYUAN

Examiner

MICHELE K. JOIKE

Art Unit

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/21/06.
2. ☒ The allowed claim(s) is/are 1-48.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 1/9/06, 7/21/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20080902
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Barrish on September 2, 2008.

In the claims:

1. An isolated *Schizosaccharomyces pombe* A-fission yeast strain comprising non-functional *dgal* and *plhl* genes.

3. The yeast strain of claim 1 comprising an exogenous gene that, when expressed in the ~~*Schizosaccharomyces*~~ *Schizosaccharomyces* yeast strain, results in TAG triacylglycerol synthesis.

7. The method of claim 6 wherein the yeast strain is a *Schizosaccharomyces pombe pombe* *Δdgal Δplhl* double deletion mutant.

28. A method of screening or identifying a compound that inhibits or prevents lipotoxicity, comprising: treating with a compound a culture of a fission yeast strain comprising non- functional *dgal* and *plhl* genes; exposing the treated culture to conditions that are suitable for inducing lipotoxicity in an untreated culture; and detecting lipotoxicity in the treated culture.

30. The method of claim 28 wherein the yeast strain is a ~~*Schizosaccharomyces*~~ *Schizosaccharomyces pombe* *Adgal Aplhl* double deletion mutant.

46. A kit or commercial package comprising a fission yeast strain comprising non- functional *dgal* and *plhl* genes and instructions for screening or identifying a compound that inhibits or prevents TAG synthesis.

47. (Original) A kit or commercial package comprising a fission yeast strain comprising non- functional *dgal* and *plhl* genes and instructions for screening or identifying a compound that inhibits or prevents lipotoxicity.

REASONS FOR ALLOWANCE

The closest art is Zhang et al (J. Biol. Chem. 278(47): 47145-55, 2003), which teaches a *Schizosaccharomyces pombe* cell with *dgal* and *plhl* genes deleted. However, Zhang et al was published in September 2003, and the effective filing date of this application is July 9, 2003. Other references do not teach a double mutant of *dgal* and *plhl*. The *plhl* gene has not been previously deleted in *S. pombe*. Deleting this gene, along with *dgal*, causes no significant TAG synthesis. Whereas, deleting similar genes in *S. cerevisiae* produces a small, but significant amount of TAG.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE K. JOIKE whose telephone number is (571)272-5915. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele K Joiike, Ph.D.
Examiner
Art Unit 1636

/David Guzo/
Primary Examiner
Art Unit 1636